

A Public Policy Practice Note

Selecting and Documenting Pension Assumptions Other Than Discount Rate, Investment Return, and Mortality

Revised June 2023

American Academy of Actuaries
Pension Committee



AMERICAN ACADEMY *of* ACTUARIES

Selecting and Documenting Pension Assumptions Other Than Discount Rate, Investment Return, and Mortality

Revised June 2023

Developed by the Pension Committee
of the American Academy of Actuaries



AMERICAN ACADEMY *of* ACTUARIES

The American Academy of Actuaries is an 19,500+ member professional association whose mission is to serve the public and the U.S. actuarial profession. For more than 50 years, the Academy has assisted public policymakers on all levels by providing leadership, objective expertise, and actuarial advice on risk and financial security issues. The Academy also sets qualification, practice, and professionalism standards for actuaries in the United States.

PENSION COMMITTEE PRACTICE NOTE—2023

This practice note is not a promulgation of the Actuarial Standards Board (ASB), is not an actuarial standard of practice (ASOP) or an interpretation of an ASOP, and is not meant to be a definitive statement as to what constitutes generally accepted practice in the area under discussion. Actuaries are not in any way bound to comply with practice notes or to conform their work to the practices described in practice notes. Events occurring subsequent to the publication of this practice note may make the practices in the practice note irrelevant or obsolete.

2023 Pension Committee

Elena Black, Chairperson
Grace Lattyak, Vice Chairperson
Linda K. Stone, Senior Pension Fellow

Michael Antoine
Michael Bain
Rachel Barnes
Margaret Berger
Maria Carnovale
Jonathan de Lutio
C. David Gustafson
Scott Hittner
Lloyd Katz

Maria Kirilenko
Gerard Mingione
Maria Moliterno
Nadine Orloff
Melody Prangle
Mary Stone
Todd Tauzer
Hal Tepfer
Carol Zimmerman

TABLE OF CONTENTS

Introduction.....	5
I. General Requirements for Selecting Assumptions.....	7
Overview.....	7
General Process for Selecting Assumption Assumptions.....	7
Consistency in Assumptions.....	9
Experience Analysis	10
Forecast Assumptions.....	11
Coordination With ASOP No. 56.....	11
Coordination With ASOP No. 25.....	13
II. Economic Assumptions.....	16
General Requirements of ASOP No. 27.....	16
Inflation.....	17
Compensation Increase.....	17
Rate of Payroll Growth.....	19
Social Security	20
Growth of Individual Account Balances	20
Variable Conversion Factors	20
Cost-of-Living Adjustments (COLAs).....	20
Setting Assumptions for Floors, Ceilings, and Other Asymmetric Plan Provisions	21
III. Demographic and Other Noneconomic Assumptions.....	23
General Requirements of ASOP No. 35.....	23
Retirement.....	24
Termination of Employment.....	27
Disability Incidence and Recovery.....	29
Optional Form of Benefit.....	30
Benefit Commencement Date.....	32
Administrative Expenses	32

PENSION COMMITTEE PRACTICE NOTE—2023

Household Composition 33
Marriage, Divorce, Remarriage, and Age Difference..... 34
Open Group 34
Hours of Service 35
Transfers and Return to Employment..... 35
Unpredictable Contingent Event Benefits 35
IV. Disclosure and Documentation..... 37

Introduction

This practice note was prepared by and reflects the views of the Pension Committee (Committee) of the American Academy of Actuaries (Academy). The purpose of this practice note is to provide information to actuaries on current and emerging practices in the selection and documentation of certain actuarial assumptions for measuring obligations of defined benefit pension plans. The intended users of this practice note are the members of the actuarial organizations governed by the actuarial standards of practice (ASOPs) promulgated by the Actuarial Standards Board (ASB).

Measurements of defined benefit pension plan obligations include calculations that assign plan costs to time periods, actuarial present value calculations, and estimates of the magnitude of future plan obligations. This practice note does not apply to individual benefit calculations or individual benefit statement estimates. The application of the information contained herein is intended to cover U.S. tax-qualified and non-qualified plans, and governmental and nongovernmental plans for which the actuary is subject to ASOP No. 27, *Selection of Economic Assumptions for Measuring Pension Obligations*; ASOP No. 35, *Selection of Demographic and Other Noneconomic Assumptions for Measuring Pension Obligations*; ASOP No. 41, *Actuarial Communications*; ASOP No. 51, *Assessment and Disclosure of Risk Associated with Measuring Pension Obligations and Determining Pension Plan Contributions*; ASOP No. 56, *Modeling*; and ASOP No. 25, *Credibility Procedures*. This practice note reflects the changes in ASOP Nos. 27 and 35 that are effective for actuarial reports issued on or after August 1, 2021, and when the measurement date in such report is on or after August 1, 2021.

It is anticipated that this practice note may be helpful to pension actuaries when setting assumptions, providing advice on setting assumptions or assessing the reasonableness of assumptions, for funding (where permitted by law), and for financial accounting. In general, references to an actuary selecting assumptions also apply to an actuary giving advice on selecting assumptions. For example, the actuary may provide advice on selecting assumptions under U.S. generally accepted accounting principles (GAAP) standards even though another party is ultimately responsible for selecting those assumptions. However, this practice note is not an interpretation of the ASOPs and is not intended to be a codification of generally accepted actuarial practice. Actuaries are not in any way bound to comply with practice notes or to conform their work to the practices described in this or any other practice note.

This practice note does not cover the discount rate, investment return, or mortality assumptions. The investment return assumption (particularly when used as a discount rate) is covered in separate practice notes published by the Academy: [*Selecting Investment Return Assumptions: Considerations When Using Arithmetic and Geometric*](#)

PENSION COMMITTEE PRACTICE NOTE—2023

[Averages](#) (dated July 2019)¹ and [Forecasting Investment Returns and Expected Return Assumptions for Pension Actuaries](#) (dated February 2019).² The mortality assumption is discussed in [Selecting and Documenting Mortality Assumptions for Measuring Pension Obligations](#) (revised practice note dated August 2022).³ This practice note also does not apply to the selection and documentation of assumptions for other types of benefit plans (e.g., postretirement health and welfare plans).

The practice note is intended to assist actuaries by describing some approaches for selecting (including giving advice on selecting), assessing the reasonableness and documenting these assumptions that the Committee believes could be employed to comply with ASOP Nos. 27 and 35. In addition, ASOP No. 4, *Measuring Pension Obligations and Determining Pension Plan Costs or Contributions*, addresses broader measurement issues for pension plans and provides guidance for coordinating and integrating the elements of these measurements that are not addressed in this practice note.⁴ Note that this practice note does not reflect the potential updates to ASOP No. 4 that will be effective in 2023. In addition, there are several general ASOPs that apply to all practice areas and may provide useful guidance with respect to selecting assumptions.⁵ Particularly, ASOP No. 1, *Introductory Actuarial Standard of Practice*, provides useful guidance as to the general meaning of common terms used in ASOPs.

This practice note replaces the October 2009 version and has been updated to reflect updates to ASOPs and evolution of generally accepted practice since that time. However, it does not reflect any proposed changes to consolidate ASOP Nos. 27 and 35 that was started in 2023.

This practice note is intended to be illustrative and spur professional discussion on this topic. Other reasonable selection and documentation methodologies currently exist and new ones likely will evolve in the future.

The Committee welcomes any suggested improvements for future updates of this practice note. Suggestions may be sent to the pension policy analyst of the American Academy of Actuaries at 1850 M Street NW, Suite 300, Washington, DC 20036 or by email to pensionanalyst@actuary.org.

¹ https://www.actuary.org/sites/default/files/2019-07/ASOP_27_7312019.pdf.

²

https://www.actuary.org/sites/default/files/files/publications/Setting_Expected_Investment_Returns_27_2019.pdf.

³ https://www.actuary.org/sites/default/files/2023-01/Mortality_PN_Rev.pdf.

⁴ In the event of a conflict between the guidance provided in ASOP No. 4 and the guidance provided in ASOP Nos. 27 and 35, ASOP No. 4 governs.

⁵ For example, ASOP No. 12, *Risk Classification (for All Practice Areas)*, and ASOP No. 23, *Data Quality*.

I. General Requirements for Selecting Assumptions

Overview

The Actuarial Standards Board (ASB) originally adopted ASOP No. 27 in December 1996, and adopted ASOP No. 35 in December 1999. ASOP Nos. 27 and 35 were most recently revised in June 2020, and are effective for actuarial reports issued on or after August 1, 2021, when the measurement date in such report is on or after August 1, 2021.

Together, these ASOPs provide guidance to actuaries in selecting economic as well as demographic and other noneconomic assumptions for measuring obligations under defined benefit pension plans that are not social insurance programs (unless the ASOPs on social insurance programs specifically call for application of these standards). The measurements of obligations for this purpose include the assignment of plan costs to time periods (such as funding valuations), liability measurements, or other actuarial present value calculations. It also includes cash flow projections and other estimates of the magnitude of future plan obligations. Measuring obligations for this purpose, however, does not generally include individual benefit calculations, individual benefit statement estimates, or nondiscrimination testing. When measuring pension obligations, actuaries should also consider the guidance on actuarial models in ASOP No. 56.

The practice note addresses assumptions selected by the actuary, as well as how to apply standards for prescribed assumptions, as defined in ASOP Nos. 27 and 35.

- A prescribed assumption set by another party is a specific assumption that is selected by another party, to the extent that law, regulation, or accounting standards give the other party responsibility for selecting such an assumption. For this purpose, an assumption selected by a governmental entity for a plan that such governmental entity or a political subdivision of that entity directly or indirectly sponsors is a prescribed assumption set by another party.
- A prescribed assumption set by law is a specific assumption that is mandated or selected from a specific range or set of assumptions that is deemed to be acceptable by applicable law. For this purpose, an assumption selected by a governmental entity for a plan that such governmental entity or a political subdivision of that entity directly or indirectly sponsors is not a prescribed assumption set by law.

General Process for Selecting Assumption

The ASOPs outline a general process an actuary should follow for selecting these assumptions, beginning with identifying the types of assumptions to use for a measurement and the types of factors that the actuary should take into account. These are addressed in more detail in sections II and III of this practice note.

PENSION COMMITTEE PRACTICE NOTE—2023

Sections 3.5 and 3.6.3 of ASOP No. 27 and section 3.10 of ASOP No. 35 identify general considerations the actuary should also take into account when applicable, including:

- Assessing whether adjustments are needed due to adverse deviation or plan provisions that are difficult to measure, depending on the purpose of the measurement, as discussed in ASOP No. 4;
- Using the actuary's professional judgment to provide the appropriate balance between refined assumptions and materiality;
- Determining the appropriate balance between refined assumptions and the cost of using refined assumptions;
- Using unbiased rounding techniques, if appropriate (ASOP No. 27 only);
- Ensuring that the combined effect of all assumptions selected by the actuary is expected to have no significant bias (i.e., it is not significantly optimistic or pessimistic) except when provisions for adverse deviation are included or when alternative assumptions are used for the assessment of risk, in accordance with ASOP No. 51;
- Reflecting changes in circumstances due to an event after the measurement date that the actuary learns about and believes is appropriate to use in determining the assumption as of the measurement date; and
- Incorporating the data and analyses from a variety of sources, including representatives of the plan sponsor and administrator, demographers, economists and other professionals, while still reflecting the actuary's professional judgment.

According to section 3.6 of ASOP No. 27 and section 3.2.5 of ASOP No. 35, a reasonable assumption has the following characteristics:

- It is appropriate for the purpose of the measurement.
- It reflects the actuary's professional judgment.
- It takes into account historical and current data that is relevant to selecting the assumption for the measurement date (to the extent relevant historical data is reasonably available).
- It reflects the actuary's estimate of future experience, observation of estimates inherent in market data (if any), or a combination of both.
- It is expected to have no significant bias (i.e., it is not significantly optimistic or pessimistic), except when provisions for adverse deviation or plan provisions that are difficult to measure are included and disclosed, or when alternative assumptions are used for the assessment of risk.

In selecting a reasonable assumption, the actuary may consider several different assumptions as reasonable for a given measurement. Also, due to differences in professional judgment, different actuaries may choose different reasonable assumptions. Therefore, it is possible for there to be a range of reasonable assumptions, both for an individual actuary and across actuarial practice, which is discussed in section 3.6.2 of ASOP No. 27 and section 3.3 of ASOP No. 35. However, the ASOPs no longer discuss a

PENSION COMMITTEE PRACTICE NOTE—2023

best-estimate range for purposes of selecting reasonable assumptions.⁶ Section 3.14 of ASOP No. 27 and section 3.8 of ASOP No. 35 require the actuary to assess the reasonableness of assumptions not selected by the actuary (except for prescribed assumptions set by law or any assumption the actuary is unable to assess for reasonableness for the purpose of the measurement). In discussing the word “reasonable,” section 2.10 of ASOP No. 1 says that “there will often be a range of reasonable methods and assumptions, and two actuaries could follow a particular ASOP, both using reasonable methods and assumptions, and reach different but reasonable results.”

Consistency in Assumptions

As provided in section 3.12 of ASOP No. 27, all economic assumptions selected by the actuary should be reviewed for consistency with the other assumptions selected by the actuary (including demographic and other noneconomic assumptions, with respect to a particular measurement) unless the assumption, considered individually, is not material. The consistency requirement may be satisfied in some circumstances by using the same inflation, economic growth, and other relevant components in each economic assumption selected by the actuary. Consistency is not necessarily achieved by maintaining a constant difference between one economic assumption and another. A change in the inflation component of one assumption may indicate that the inflation component needs to be changed in some or all of the other assumptions. However, if an assumption changes due to a factor unique to that assumption, it may not be necessary to change the other assumptions. Consistency does not need to be assessed with respect to assumptions not selected by the actuary.

Section 3.6 of ASOP No. 35 contains a similar consistency requirement for demographic assumptions. For example, if an employer’s business is in decline and the effect of that decline is reflected in the turnover assumption, it may be appropriate to reflect a change in the retirement assumption. Economic and demographic assumptions may be subject to common influences. Continuing the above example, if the employer’s business is in decline, it may be appropriate to reflect that fact in the compensation increase assumption. In addition, the actuary should evaluate the assumptions for consistency with assumptions used for measurements of different benefit plans covering the same covered group, if that information is available to the actuary. To the extent the actuary determines that inconsistencies exist, the actuary should determine whether those inconsistencies are reasonable and make adjustments where appropriate. As with economic assumptions, the actuary is not required to select assumptions that are consistent with assumptions that are not selected by the actuary.

Generally, changes in assumptions are not phased-in over multiple measurement dates. However, if an assumption is phased-in, section 3.15 of ASOP No. 27 and section 3.9 of ASOP No. 35 say that an actuary should determine the reasonableness

⁶ This change was made with the prior ASOP updates, which were effective for measurement dates on or after Sept. 30, 2014.

PENSION COMMITTEE PRACTICE NOTE—2023

of the assumption and its consistency with other assumptions as of the measurement date at which it is applied, without regard to planned assumption changes for future measurement dates.

The actuarial assumptions and the relationships among them should be reviewed and updated if appropriate at each measurement date, as stated in section 3.12 of ASOP No. 27 and section 3.7 of ASOP No. 35.

Experience Analysis

Generally, the actuary does not need to undertake a complete assumption study at the time of each measurement. However, many actuaries conduct and document an analysis of actual plan experience and its effect on the plan's liability versus the assumed experience every three to five years for significant assumptions. Alternatively, some assumptions may be reviewed more frequently, but less rigorously, with a more thorough analysis conducted if the results of the basic analysis indicate that experience may be deviating from the assumption. For example, assumptions may be tested against evolving experience by comparing the expected experience with the actual number of participants affected, calculating the plan's liability gain or loss by source, etc. The results for one year may not be indicative of a need to update the assumption, but a consistent trend over a number of years may indicate the need for a change. The analysis may be adjusted for any unusual events during the study period, such as an early retirement window, lump sum offer, or workforce reduction. See the discussion below about coordination with ASOP No. 25 for more information about reflecting credibility.

In addition to the assumptions examined for recent experience, all assumptions may be examined with respect to changes, if any, in reasonable expectations of future experience or with respect to actual experience collected over a longer period of time. When assessing whether to use past experience in setting an assumption, the actuary should take into account whether the experience period is likely to be representative of the future and should not give undue weight to experience that may be not relevant to future expectations. For small employer plans or other situations for which experience may not be sufficiently credible, a comparison of the assumptions to past experience may be less useful. However, even for these plans, a periodic review of assumptions based on current expectations for the employer's business and workforce is warranted.

Special events (e.g., pension plan changes, risk transfer transactions, retiree health plan changes, human resource policy changes, early retirement windows, pandemics, employer withdrawals from a plan, plan spin-offs or mergers, significant expansion or contraction of the workforce) may trigger a need for an additional review and documentation of the selection of actuarial assumptions. The actuary may consider whether the occurrence of the event could significantly alter the future experience of the

PENSION COMMITTEE PRACTICE NOTE—2023

plan and whether any assumption changes are warranted to better reflect that future experience.

ASOP Nos. 27 and 35 apply not just when an actuary selects an assumption, but also when an actuary gives advice on selecting an assumption; in general, this note refers to an actuary selecting assumptions, but also generally refers to when an actuary gives advice on selecting assumptions. Many sections of ASOP Nos. 27, 35, and 4 do not apply to prescribed assumptions set by law (i.e., statutes, regulations, or other legally binding authority), such as assumptions prescribed in Internal Revenue Code (IRC) Regulation 1.430(h)(3)-1; however, certain disclosures are required for prescribed assumptions set by law as described in section 4 of ASOP No. 4.

Forecast Assumptions

When performing forecasts of pension obligations or risk assessments (as described in ASOP No. 51⁷), an actuary may consider multiple sets of actuarial assumptions.

A different set of valuation assumptions may be selected for each future date in the forecast period, depending on a variety of considerations. For example, current IRS minimum requirements for calculating lump sum benefits use a current set of segment interest rates. However, when projecting future lump sum amounts in future forecast periods, an actuary may consider using “dynamic” projected future segment interest rates.

In addition to a set of valuation assumptions for each future measurement date in the forecast period, other set(s) of assumptions may be necessary to appropriately project current data to future measurement periods or illustrate potential risk. This other entirely distinct set of assumptions, often called “experience assumptions” in the context of forecasting studies, is used to reflect projected “actual” experience of the plan’s population as it evolves from one future date to the next. For example, an assumption for a set of retirement and termination rates, or assumptions about future new entrants, if appropriate to the purpose of the measurement, may be selected to reasonably project participants to the forecast measurement date.

Coordination With ASOP No. 56

In addition to the requirements of ASOP Nos. 27 and 35, pension actuaries must comply with the requirements of ASOP No. 56, which generally covers all practice areas. Note that most of the guidance in ASOP No. 56 is consistent with the guidance in ASOP Nos. 27 and 35 but there are variations among the guidance for the actuary

⁷ Actuarial Standard of Practice No. 51, *Assessment and Disclosure of Risk Associated with Measuring Pension Obligations and Determining Pension Plan Contributions*, effective Nov. 1, 2018, ASB Doc. No. 188.

PENSION COMMITTEE PRACTICE NOTE—2023

to consider. Specifically, all three ASOPs cover the following areas but with some differences in the guidance:

- *Information or data to consider when setting the assumption.* ASOP No. 56 (consistent with ASOP Nos. 27 and 35) notes that the guidance on this topic is applicable only when the actuary takes responsibility for the assumption. The guidance in ASOP Nos. 27 and 35 is more robust while still consistent with the guidance on this topic in ASOP No. 56; therefore, the actuary should make sure to follow ASOP Nos. 27 and 35.
- *Range of assumptions.* All three ASOPs acknowledge there may be a range of assumptions that are reasonable. In addition, ASOP No. 56 suggests the actuary can consider multiple model runs using that range of assumptions. In this context, note that assumptions used to assess risk may have some bias or other aspect that may mean it is acceptable under ASOP No. 56 but may be considered unreasonable for other purposes.
- *Consistency between assumptions.* While all three ASOPs discuss consistency between all assumptions, ASOP Nos. 27 and 35 specifically state, “The actuary is not required to select assumptions that are consistent with assumptions not selected by the actuary.” ASOP No. 56 states, “Where appropriate, the actuary should use, or confirm use of, assumptions for the model that are reasonably consistent with one another for a given model run.” Consequently, one might conclude that ASOP No. 56 requires all assumptions be consistent “where appropriate,” whether selected by the actuary or not.

For two reasons, some pension actuaries find the ASOP No. 56 requirement regarding additional assessment of consistency for assumptions not selected by the actuary a gray area. The first is the terminology “where appropriate,” which acknowledges the potential for circumstances in which inconsistency would be acceptable. But this does not establish whether use of assumptions not set by the actuary represents such a scenario.

Second, the scope of ASOP No. 56 states that, “If the actuary determines that the guidance from another ASOP conflicts with the guidance of this ASOP, the guidance of the other ASOP will govern.” ASOP No. 27 and 35 do not require—but do not forbid—an assessment of consistency with assumptions not selected by the actuary. Accordingly, the actuary should use professional judgment to determine whether the ASOP No. 56 requirement for such an assessment conflicts with or supplements ASOP No. 27 and 35.

An example of when this additional assessment of consistency could come into play is when the plan sponsor sets the expected rate of return and the actuary sets the salary scale assumption. Both assumptions have an underlying inflation

PENSION COMMITTEE PRACTICE NOTE—2023

component. Under ASOP No. 56, the actuary should make sure that the two assumptions are consistent, but ASOP No. 27 permits the two to be inconsistent.

If inconsistent assumptions are used in modeling, disclosing the inconsistency and the reason for it would appear to satisfy ASOP Nos. 27, 35, and 56. ASOP No. 56 specifically says in section 3.1.6(c) that “in the case of assumptions prescribed by applicable law, the actuary’s disclosure may be limited to identifying the possibility of an inconsistency with other assumptions.”

- *Appropriateness of existing assumptions.* ASOP No. 56 requires the actuary to consider whether all assumptions in the model, when reusing the model, are appropriate or should be changed, when practical and appropriate. This is similar to the requirement in ASOP Nos. 27 and 35, but in those standards the actuary must only consider the appropriateness of assumptions previously selected by the actuary.
- *Combined effect of assumptions/reasonability in the aggregate.* ASOP No. 56 discusses ensuring that assumptions in the aggregate produce reasonable output. ASOP Nos. 27 and 35 require that the combined effect of assumptions has no significant bias (in addition to selecting an assumption that is reasonable). These requirements are slightly different and both need to be followed.

Note that the assessment under ASOP Nos. 27 and 35 is only for assumptions selected by the actuary. ASOP No. 56 does not treat assumptions set by the actuary any differently than assumptions that are not set by the actuary. Similar to the issue of consistency between assumptions noted above, this could be a gray area requiring professional judgment.

Under ASOP No. 56, the actuary must disclose if the output may be unreasonable due to the aggregate effect of otherwise reasonable assumptions.

Coordination With ASOP No. 25

ASOP Nos. 27 and 35 contain brief discussions of credibility and advise that the actuary should refer to ASOP No. 25, *Credibility Procedures*, for additional guidance. It is therefore important to understand when ASOP No. 25 applies, and how it may affect the assumption setting process.

ASOP No. 25 applies to all actuarial areas and defines credibility as a measure of the predictive value the actuary attaches to a particular set of data. A credibility procedure is defined as a process that involves either “the evaluation of subject experience for potential use in setting assumptions without reference to other data” or as “the identification of relevant experience and the selection and implementation of a method for blending the relevant experience with the subject experience” for potential use in setting assumptions.

PENSION COMMITTEE PRACTICE NOTE—2023

ASOP No. 25 applies to actuaries when performing actuarial services involving credibility procedures in the following situations:

- when the actuary is required by applicable law (statutes, regulations, and other legally binding authority) to evaluate credibility;
- when the actuary chooses to evaluate the credibility of subject experience, or states in any related actuarial communication that credibility has been evaluated in accordance with this ASOP;
- when the actuary is blending subject experience with other experience; or
- when the actuary represents the data being used as statistically or mathematically credible.

The first of these situations generally apply to pension actuaries only in limited situations. One example of when the actuary is legally required to evaluate credibility is when a plan that is subject to the single-employer funding rules under Section 430 of the IRC applies to use plan-specific mortality. In most situations, and for most assumptions, however, evaluating the credibility of an assumption is not legally required.

The second situation would apply if the actuary chooses to evaluate credibility (or is directed by a principal to evaluate credibility) and represents that credibility has been evaluated in accordance with ASOP No. 25. An actuary may choose to follow this approach if sufficiently credible data is available for a given assumption and the actuary wants to be able to represent that credibility procedures have been followed. This is very similar to the fourth situation noted above, however in the fourth situation the actuary has decided to represent that the data is credible.

The third situation—blending of subject experience (plan experience) with other relevant experience—is the one that is most likely to be relevant to a pension actuary. This will typically apply when there is other relevant experience that might also be used to set the assumption. One example is blending plan mortality experience with a standard mortality table published by the Retirement Plans Experience Committee (RPEC) of the Society of Actuaries (SOA). When creating a custom mortality table, the plan experience may be blended with the standard table by utilizing statistical credibility procedures such as Bayesian credibility procedures or limited fluctuation model, when plan data is judged to be only partially credible. Another example is combining plan turnover experience (the subject experience) with a reference assumption such as the plan's previous assumption or the 2003 Society of Actuaries Pension Plan Turnover Study.⁸ In the latter example, a higher degree of subjectivity will likely come into play regarding the degree of credibility to assign to the reference assumption.

⁸ <https://www.soa.org/experience-studies/2000-2004/research-2003-soa-pension-plan-turnover-study/>.

PENSION COMMITTEE PRACTICE NOTE—2023

ASOP No. 25 does not apply outside of these situations. For example, an actuary may conclude that there is no other relevant experience with which to blend the plan experience. In this situation the actuary may conclude that, despite a lack of credibility, plan experience is relevant for setting an assumption. An example might be the retirement assumption, for which standard assumptions generally do not exist.

ASOP No. 25 contains a more detailed discussion of the selection of other relevant experience with which to blend plan experience and notes that there may be a considerable element of actuarial judgment involved in deciding on the weight to give to each. When selecting relevant experience, with which to compare subject experience, ASOP No. 25 states that the relevant experience should have similar characteristics to the subject experience. The topic of risk characteristics is covered in ASOP No. 12, *Risk Classification (for all Practice Areas)*.

ASOP No. 35 notes that “specific experience of the covered group or other groups with similar characteristics may be useful in forming a judgment about future expectations. However, the actuary should not give undue weight to experience that is not sufficiently credible.” Whether experience is sufficiently credible may depend on whether there is other relevant experience that might be considered as an alternative in setting that assumption. Where other relevant experience does not exist, the actuary may apply a lower threshold for considering plan experience than would be the case if standard tables or an aggregation of experience for similar employers were available.

ASOP No. 35 also advises that the actuary should not give undue weight to experience that may not be relevant to future expectations. The example cited in the ASOP is where recent rates of termination and retirement are largely attributable to a one-time workforce reduction. For many employers, experience during 2020 and 2021 will be heavily influenced by the COVID-19 pandemic and its aftermath and may similarly not be a particularly useful in setting future expectations.

[*Credibility Educational Resource for Pension Actuaries*](#), published by the Society of Actuaries in 2017, is a very useful resource.⁹ Although its focus is on the application of credibility to the selection of a mortality assumption, the discussion may also be relevant to applying credibility theory to other assumptions.

⁹ <https://www.soa.org/globalassets/assets/files/static-pages/sections/retirement/credibility-resource-pension.pdf>.

II. Economic Assumptions

General Requirements of ASOP No. 27

ASOP No. 27 provides guidance to actuaries in selecting economic assumptions for measuring obligations under defined benefit pension plans that are not social insurance programs (unless ASOPs on social insurance specifically apply this standard). Consistent with ASOP No. 35, the measurement of obligations includes the assignment of plan costs to time periods (such as funding valuations), liability measurements, or other actuarial present value calculations. It also includes cash flow projections and other estimates of the magnitude of future plan obligations. Measuring obligations, however, does not generally include individual benefit calculations, individual benefit statement estimates, or nondiscrimination testing.

As explained in the purpose and scope of the ASOP, selecting assumptions also includes giving advice on selecting assumptions.

The ASOP outlines a general process an actuary should follow for selecting economic assumptions, beginning with identifying the types of assumptions to use for a measurement by considering the following factors:

- The purpose of the measurement
- The characteristics of the obligation that will be measured, such as the measurement period, pattern of plan payments over time, open/closed group, materiality, volatility, etc.
- The materiality of the assumption to the measurement

The ASOP then outlines a general process an actuary should follow for selecting economic assumptions, including:

- Identifying components, if any, of the assumption
- Evaluating relevant data
- Taking into account factors specific to the measurement
- Taking into account other general factors when they are applicable
- Selecting a reasonable assumption (see discussion in Section I of this practice note)

After completing these steps for each individual economic assumption, the actuary should review the set of economic assumptions for consistency and make any appropriate adjustments (see discussion in Section I of this practice note).

PENSION COMMITTEE PRACTICE NOTE—2023

When evaluating relevant data, section 3.4 of ASOP No. 27 states that the actuary should review appropriate recent and long-term historical economic data. However, changes in the underlying environment may mean that the actuary should not give undue weight to recent experience and historical data that may not always be appropriate.

Inflation

The actuary may use an approach that treats inflation as an explicit component of other economic assumptions or as an independent assumption. Because there are different measurements of inflation, the actuary should evaluate the appropriate inflation data, which may include consumer price indices, the implicit price deflator, forecasts of inflation, yields on government securities of various maturities, and yields on nominal and inflation-indexed debt. Instead of using a single inflation rate, the actuary may also use select and ultimate inflation rates to reflect rates that vary by period and may also wish to consider variations in the inflation rate by location.

Compensation Increase

Use of a compensation increase assumption is generally appropriate for measurements involving active employees who are eligible for pension benefits that are based on their future compensation. In some cases, an assumption for future compensation increases may not be needed even in a plan with pay-related benefits. Some examples include:

- A valuation using the traditional unit credit cost method where the participants' compensation expected to be earned during the valuation year is provided by the client
- A measurement for a plan in which all participants currently earn more than a fixed plan limitation on compensation
- Plans with frozen benefits
- A measurement of the benefits accrued as of the measurement date.

Even in these situations, an assumption may be needed for past increases in compensation if complete compensation data are not available.

Generally, a participant's compensation is expected to grow over time with inflation, productivity growth (or real wage growth), and merit or promotion/longevity adjustments. The format of the assumption may be a single rate of increase for all employees, an increase that varies the increase with age and/or service, or an increase that varies by calendar, plan, or fiscal year. In certain circumstances, it may be appropriate to reflect a temporary freeze or reduction in compensation. Separate increases may be appropriate for employees in different categories (e.g., union versus nonunion, salaried versus hourly), in different industries, job classifications, or geographic locations and on different components of compensation (e.g., bonus versus base).

PENSION COMMITTEE PRACTICE NOTE—2023

The actuary should evaluate the available compensation data which may include the following:

- The plan sponsor's current compensation practices and any anticipated changes in this practice
- Current compensation distributions by age or service or other demographic variable
- Historical compensation increases and practices of the plan sponsor and other plan sponsors in the same industry or geographic area
- Historical national wage increases and productivity growth

When reviewing plan sponsor specific compensation data, the actuary may want to carefully weigh the reliability (and credibility where appropriate) of that data when selecting the compensation increase assumption. The credibility procedure used need not be a precise mathematical process. Professional judgment could be employed to select appropriate level of rigor used to determine to what extent the data serves as a reliable basis for the assumption.

There are several measurement-specific factors that an actuary should take into account such as:

- Whether changes in the plan sponsor's compensation practices may affect the compensation increase assumption, at least in the short term;
- Whether there are any competitive factors (such as industry or geographic factors) that are appropriate to the measurement and measurement period that should be reflected;
- Whether recent collective bargaining trends should be expected to continue in the future after reflecting the actual negotiated rates in the short term;
- What changes should be made to the assumption and the associated future compensation projection methodology to address potential volatility of components of compensation, such as bonuses or overtime compensation, if they are included in future pension benefits; and
- Whether expected compensation increases should reflect a shortened measurement period due to an expected plan freeze or termination.

Employer-specific adjustments to national data may be considered based on industry, region, or financial strength of the employer. However, it may not necessarily be appropriate to assume that differences between the employer and the national economy continue indefinitely. Thus, the actuary may decide that the selection of a long-term compensation increase assumption should not be influenced by a short-term period of experience variation. Alternatively, a select and ultimate compensation increase may be developed to explicitly reflect both the expected short-term and long-term compensation patterns. In this regard, the purpose of the measurement may be a relevant consideration. For example, when determining target normal cost for U.S. funding valuations subject to Section 430 of the IRC or in a short-term projection of traditional unit credit normal cost,

PENSION COMMITTEE PRACTICE NOTE—2023

short-term expectations may be the most reasonable basis for the compensation increase selection.

In plans covering only business owners and a few other participants, the plan obligation for the owners may be significantly larger than the combined obligations of the other participants. In such a case, it may be reasonable to base the entire plan's compensation increase on the expected compensation experience of the owners if the impact on total plan obligations of the difference in the compensation increase for the non-owner participants is relatively small. Alternatively, a separate compensation increase for the business owners and the non-owner participants may be developed.

An actuary may want to test the reasonableness of the total compensation increase assumption. One way to do this may be to compare it to historical year-over-year differences for individual employees by age and service. Another method may be to compare the employer's overall expected payroll increase to the total projected payroll for those participating in the plan, adjusted for projected exits and new entrants, and the compensation increase assumption. Note that the compensation increase assumption usually exceeds the percentage increase in total payroll, unless the covered employee population is increasing significantly. This is because the merit component of the compensation increase assumption does not contribute to the increase in total payroll for the year for those employees exiting from the active population, and any new hires are generally lower-paid or less-senior.

Rate of Payroll Growth

A plan's population total payroll generally grows at a different rate than does a participant salary for an average participant or the expected growth in the current year's total payroll in a closed group actuarial valuation using a compensation increase assumption. This is because generally new entrants' profile is different from that of terminating participants. Therefore, when a payroll growth assumption is needed, a pension actuary is likely to use a payroll growth assumption that is different, but consistent with, a compensation increase assumption. As always, the actuary should apply professional judgment, given the purpose of the measurement, when selecting an approach to setting this assumption.

For example, a pension actuary may need to amortize an unfunded actuarial liability over a period of time using a payment schedule that is level as a percent of payroll. The rate of payroll growth of a covered group can be approximated by rates of future inflation and real wage growth. Another approach is to forecast the covered group's payroll by employing assumptions for continuing member compensation increases and assumptions for new entrants ages and wages at hire.

PENSION COMMITTEE PRACTICE NOTE—2023

Social Security

Increases in the Social Security wage base are usually based on changes in national average wages. Therefore, the Social Security wage base assumption will typically be higher than the inflation assumption, but often lower than the employer's overall compensation increase assumption (except for certain plan sponsors and/or industries where individual compensation increases—which reflect an individual's growing experience and seniority—are not expected to be higher than increases in the national average wage, which reflect the characteristics of the national workforce as a whole).

Growth of Individual Account Balances

An assumption for future interest crediting rates or investment earnings may be needed for:

- Plans with individual account balances, such as cash balance plans, unless the plan document defines a fixed interest credit rate
- Plans with benefits otherwise dependent on individual account balances, such as floor-offset plans

For these types of plans, the actuary will generally want to consider information specific to the plan-defined interest crediting rate.

Variable Conversion Factors

The actuary may need assumptions for (1) the future interest rate used to convert account balances to annuities or to convert between different forms of annuities and (2) future interest rates used to compute minimum lump sum distributions under IRC Section 417(e)(3). Information specific to the plan-defined interest conversion rate will influence the setting of this assumption. Note that in certain circumstances, such as when mandated by laws or regulations, the actuary may not be allowed to reflect the value of an annuity derived from an account balance, or may not be allowed to reflect the lump sum value of any annuity. See Section III of this practice note for considerations when making assumptions about optional forms of payment when actuarial equivalence is based on variable factors. See also the practice note [Valuing Benefits Payable as a Lump Sum](#) (dated February 2019) for a detailed discussion of this topic.

Cost-of-Living Adjustments (COLAs)

Actuaries may need to set an assumption for the future amount of COLAs applied to the benefits payable from a plan. Often a plan specifies the amount of COLA by reference to all or a portion of a specific cost-of-living index. Information specific to the components of that plan-defined COLA is relevant when setting this assumption.

If a plan sponsor grants ad hoc COLA increases, the actuary may want to consider setting an assumption to reflect the possibility of future ad hoc COLA increases. In this case, the

PENSION COMMITTEE PRACTICE NOTE—2023

actuary may want to review the history of ad hoc COLAs—including the frequency and amount of those increases—as well as the future economic environment and health of the plan sponsor.

In addition, certain plan limits are automatically adjusted for inflation, such as the IRC Section 401(a)(17) compensation limits and Section 415(b) benefit limits and increases should be assumed if appropriate for the purpose of the measurement. For some purposes (such as U.S. funding valuations for single employer defined benefit plans under IRC Section 430), the actuary may not be able to reflect a COLA assumption on those limits due to applicable laws or regulations. However, even in these cases, reflecting a COLA assumption may still be appropriate for related measurements (such as when projecting future results of U.S. funding valuations or where otherwise not prohibited by laws or regulations, such as when calculating benefit obligations for purposes of U.S. GAAP accounting for corporate pension plans).

Setting Assumptions for Floors, Ceilings, and Other Asymmetric Plan Provisions

For many common plan provisions, additional analysis may be appropriate when selecting some assumptions for a measurement in which variance in the experience affects the plan benefits asymmetrically. Thus, approaches other than using the expected value might be considered if deviation in one direction does not have approximately the same effect as comparable deviation in the other direction. In these cases, probability distributions, stochastic modeling or option-pricing techniques may be appropriate, either to value the benefits directly, or to develop an adjusted assumption that reflects the interaction of the asymmetric plan provision with the underlying economic phenomenon. Some cases where these techniques may be appropriate include:

- Valuing a floor-offset provision where the plan benefit is based on a comparison of a minimum defined benefit to a defined contribution account balance. For this type of provision, actuaries may also need to consider many additional issues that are beyond the scope of this practice note.
- Valuing a lump sum payment option based on the greater result of using both a fixed and variable rate. If, for example, the variable rate is expected to be less than the fixed rate, but may be higher than the fixed rate with a meaningful probability, the actuary might consider alternatives that incorporate a value for the variable rate in excess of that obtained using only the fixed rate. A stochastic or probability analysis may help assess the proportion of time and by what amount the variable rate calculation result is likely to fall above the fixed rate result.
- Valuing benefits that vary with a COLA that does not always vary by a fixed proportion of the change in the applicable index or is otherwise limited in certain ways. Examples include: (1) a benefit that is increased by the lesser of the change in the applicable index or a fixed percentage, or (2) a benefit that is increased by a certain percentage of the applicable index up to a certain amount (e.g., a hurdle rate) and a different percentage of the index in excess of that certain amount.

PENSION COMMITTEE PRACTICE NOTE—2023

Additional considerations arise in situations where there is a cumulative or “catch-up” COLA (e.g., the lesser of consumer price index (CPI) increases since retirement or 3% per year accumulated since retirement).

- Valuing cash balance plan provisions that tie the interest crediting rate to a variable interest rate or an economic index subject to a fixed floor or ceiling.
- Valuing a benefit that is increased by an amount that is driven by the plan’s investment performance.

To illustrate the approach to setting an assumption, consider the case of a plan that increases benefits in payment status each year by the amount that inflation for the prior year exceeds 3%. Suppose the actuary’s inflation assumption is 2.5%, but that expected yearly fluctuations in the level of general inflation are such that years when inflation exceeds 3% are expected to have a significant impact on the value of the benefit.

Based on stochastic modeling or other similar techniques, the actuary may determine that it is appropriate to assume that benefit payments will increase by an average of 0.5% annually. This does not imply that the overall inflation assumption should be increased to 3.5% (i.e., 3% plus 0.5%) instead of 2.5%. Rather, when considering that in some years the adjustment will be 0% (those where inflation is below 3%) and that in others it will be greater than 0% (those where inflation exceeds 3%), the actuary may conclude that the aggregate effect can be approximated by a 0.5% assumption for benefit adjustments. The 0.5% is an additional economic assumption (separate from, but affected by, the general inflation assumption) that the actuary has used to determine the value of expected future benefits payable under the plan.

In this example, for purposes of assessing consistency among the economic assumptions, the applicable assumption is the general inflation assumption of 2.5%. In the disclosure of assumptions, the actuary would typically disclose both the general inflation assumption (2.5%), and the assumption for the average long-term benefit increase expected to be granted under the plan (0.5%). The disclosed rationale for the benefit increase assumption would likely describe the interaction of the general inflation assumption with the plan provisions.

A complete discussion of the techniques that may be used in these cases is beyond the scope of this practice note.

III. Demographic and Other Noneconomic Assumptions

General Requirements of ASOP No. 35

ASOP No. 35 provides guidance to actuaries in selecting demographic and other noneconomic assumptions for measuring obligations under defined benefit pension plans that are not social insurance programs (unless ASOPs on social insurance specifically apply this standard). Consistent with ASOP No. 27, the measurement of obligations includes the assignment of plan costs to time periods (such as funding valuations), liability measurements or other actuarial present value calculations. It also includes cash flow projections and other estimates of the magnitude of future plan obligations. Measuring obligations, however, does not generally include individual benefit calculations, individual benefit statement estimates, or nondiscrimination testing.

As explained in the purpose and scope of the ASOP, selecting assumptions also includes giving advice on selecting assumptions.

Similar to ASOP No. 27, ASOP No. 35 outlines a general process an actuary should follow for selecting demographic assumptions. The actuary does not need to follow this complete process at each measurement date for each assumption if previously selected assumptions continue to be reasonable, in the actuary's professional judgment. The process includes:

- Identifying the types of assumptions (see discussion below)
- Considering an assumption universe relevant to each type of assumption identified (e.g., published tables, plan experience, published studies, future expectations, etc.)
- Selecting assumption formats (e.g., a table of rates or point estimate)
- Selecting the specific assumptions, taking into account factors such as the purpose and nature of the measurement, plan design features that may influence the assumption, plan-specific or other relevant experience, and relevant factors that may affect future experience
- Selecting a reasonable assumption (see discussion in Section I of this practice note)

It may be appropriate to use different assumptions for different segments of the covered population. In all cases, the actuary should take into account the significance of each assumption selected, which may include the consequences of experience deviating significantly from the selected assumption.

When identifying the types of assumptions to use for a specific measurement, the actuary should take into account the following factors:

- The purpose of the measurement

PENSION COMMITTEE PRACTICE NOTE—2023

- The plan provisions or benefits and factors that will affect the timing and value of any potential benefit payments
- The characteristics of the obligation to be measured, such as measurement period, pattern of plan payments over time, open or closed group, and volatility
- The contingencies that give rise to benefits or result in loss of benefits
- The materiality of each assumption to the measurement
- The characteristics of the covered group

The actuary does not need to select a separate assumption for every contingency. For example, the actuary may use an assumption that combines several contingencies rather than selecting a separate assumption for each if a plan is expected to provide benefits of equal value to employees who voluntarily terminate employment or become disabled, retire, or die.

Assumptions may be tested against evolving experience using several methods, including comparing the expected experience with the actual number of participants affected, calculating the plan's liability gain or loss by source, etc. The results for one year may not be indicative of a need to update the assumption, but a consistent trend over a number of years may indicate the need for a change. The analysis may be adjusted for any unusual events during the study period, such as an early retirement window, lump sum offer, or workforce reduction.

Other methods may be used—for example, as one test of assumed termination rates against evolving experience, the actuary may first compute the probability of an employee continuing in service from a sample of age and/or service durations through retirement or a specified age. Then the actuary would compare these results with the age/service distribution of the current population to see if the assumption is plausible. For example, if the termination rates show that the probability of remaining in service from age 30 to age 60 is 5%, but the current population distribution includes a proportionately large group of active employees in their late fifties or early sixties with 30 or more years of service, the actuary may consider adjusting the assumed termination rates. This approach may only be reasonable if termination and hiring patterns have been historically consistent and, considering expected future hiring patterns and employment patterns, are not expected to differ materially in the future.

Retirement

Use of a retirement assumption is generally appropriate for all types of calculations involving active employees. However, there are no standard tables of retirement rates, as retirement behavior is heavily influenced by factors such as plan-specific benefit eligibility provisions and industry or employer-specific work conditions. The actuary would generally choose an assumption based on the experience and expectations of the particular group of participants under the specific benefit eligibility provisions of the plan being valued and the industry work and economic conditions.

PENSION COMMITTEE PRACTICE NOTE—2023

If the number of plan participants is large enough to be credible, the actuary may use professional judgment and decide whether to construct a retirement table solely from the available sample (assuming that the actuary believes that conditions during the experience period are likely to continue to prevail in the future). Even where the number of plan participants falls short of the number required for full credibility, the actuary may conclude that due to the lack of other relevant experience on which to base the assumption, it is still appropriate to use plan experience in setting the retirement assumption.

The format of the retirement assumption is generally a table of rates that vary by age, and may also vary by service, years since first eligible for retirement or other benefit eligibility¹⁰ or sub-population (e.g., hourly or salaried employees). Variation by service is particularly important if service milestones drive significant differences in benefit level, but sometimes service may be a significant factor even when such milestones are not present.

The table of retirement rates is applied when an active employee is projected to have met the age and service requirements for retirement. Separate rates may be set for the ages at which active employees are projected to retire directly from active employment and, for those employees, when benefit payments are projected to commence (see more on this below). Additionally, separate rates based on age and/or service may be applied to reflect special retirement eligibilities (e.g., “30 and out” and “rule of 80”).

Although in past years it may have been common to assume that all participants retire by normal retirement age, actuaries now commonly extend tables to later ages (if supported by experience), reflecting the fact that for some plans, a portion of active participants are expected to work past the plan’s normal retirement age. Extending the retirement table beyond normal retirement age may be particularly significant if the plan suspends benefits, thereby resulting in lower obligations for participants who work past normal retirement, or if the plan has a very generous actuarial increase provision, resulting in higher obligations for those working past normal retirement.

Experience for plans in some industries in particular has shown an increasing number of employees working to later ages than in past years. While recent advances in health care and improvements in work conditions may be partially responsible for employees working longer, another driver of this trend may be a lack of retirement readiness. In particular, frozen defined benefit plans may result in a higher number of employees working past normal retirement age, particularly if the employer’s defined contribution plan does not provide benefits comparable to what the defined benefit plan previously provided. Where these factors are particularly relevant, the actuary may decide that it is appropriate to adjust the retirement assumption to reflect an ongoing trend of increasingly later retirements.

¹⁰ For example, in public sector plans with a deferred retirement option plan (DROP), reaching eligibility for this DROP provision.

PENSION COMMITTEE PRACTICE NOTE—2023

The purpose of the measurement may also be a consideration when selecting the assumption format. For instance, if the valuation is expected to produce accurate cash flows (in addition to reasonable liabilities) or the discount rate varies based on the timing of expected benefit payments, then using a table of rates that varies by the relevant factors affecting the expected timing of participants' retirement may be critical. However, if the valuation is focused primarily on deriving a liability or future contribution level, projecting the precise timing of benefit payments may not be as important, as long as the valuation produces a reasonable result for its purpose. As another example, if the valuation's purpose is to identify the cost of adding or changing a subsidized retirement benefit, consistent with ASOP No. 35 section 3.2.4(b), the actuary may want to consider whether the current assumption is a reasonable reflection of anticipated experience prior to the amendment (given the new objective of measuring the cost of a plan change) and whether it is appropriate to modify the retirement age assumption used to value the benefits after the change to reasonably reflect the change in expected retirement experience for the new benefit provision.

Depending on the purpose of the valuation, the use of a single assumed retirement age rather than a series of retirement probabilities and ages may be a reasonable expedient if, for example, any of the following conditions is satisfied:

- Benefits at all retirement ages are generally actuarially equivalent on a basis comparable to the valuation basis, and the pattern of benefit payments is not a significant valuation output.
- The single retirement age reasonably captures the liability-weighted average behavior of the group.
- There is a reasonable expectation that the single, assumed retirement age will be selected by all or almost all of the plan members, weighted by liability size. For example, use of the owner's expected retirement age in a two-person plan consisting of a long-service owner and a short-service administrative assistant would likely satisfy this condition.
- Actual plan experience indicates that a material number of retirements do not occur at other retirement ages. For example, a plan with benefits significantly more subsidized at one potential retirement age and nearly all plan participants are aware of that subsidy and retire at that age would likely satisfy this condition.

A point estimate of a single retirement age with 100% probability will not capture differences in the value of retirement benefits payable at different retirement ages. Even if the plan adjusts benefits for early or late retirement using a reasonable actuarial equivalence basis, that basis will likely be subsidized (positively or negatively) relative to the valuation basis, especially considering the number of different liability measures typically required for a pension plan. This mismatch is particularly likely if the valuation is done using a yield curve or segment interest rates (such as those used for U.S. pension funding rules under IRC Section 430), because the timing of the benefit affects the interest rates used to calculate its present value. Therefore, if the underlying behavior is

PENSION COMMITTEE PRACTICE NOTE—2023

best reflected by a series of retirement probabilities, the actuary may be hard-pressed to find a single retirement age that reliably approximates that behavior for all valuation purposes. Furthermore, even if a single retirement age can be found, the actuary will need to reevaluate the assumption whenever other relevant assumptions are changed or the purpose of the measurement is changed.

Several employment-related factors, some external to the pension plan, may influence an employee's decision to retire at a particular age and may be considered when the actuary develops a retirement assumption, such as:

- The pension plan design (including the level of benefits and payment options at early and late retirement ages)
- The design of the employer's other benefit plans (including the eligibility age and amount of disability benefits, or employer-subsidized retiree health and welfare benefits)
- The design of other available benefits (e.g., the eligibility age and amount of Social Security and Medicare benefits).

The actuary may find it reasonable to increase retirement rates at ages when subsidized benefits become available and reduce rates at ages immediately prior. Other employment-related factors may also affect retirement patterns, such as physical requirements of the job and work environment and conditions.

In the short term, certain factors may influence the age when participants retire, such as recent significant gains or losses in the financial markets (e.g., through their impact on employees' savings balances) or the employer's financial condition. The actuary may also consider whether to assume employees retire sooner if the employer is experiencing significant financial hardship. However, in most cases it would not be appropriate to assume those short-term factors will affect the ages and rates of retirement over the long term. When it is appropriate, the actuary may consider using separate select and ultimate retirement assumptions.

If few employees have reached retirement age, it may not be possible to collect sufficient experience data to compare to the assumption until more time has passed. Retirement experience of similar employers with similar benefit structures (if available) may be useful when an employer's own experience is insufficient.

Termination of Employment

Using a termination of employment assumption is generally appropriate for most types of calculations involving active employees. However, for certain small employee populations, it may be reasonable not to use a termination of employment assumption. In certain other cases, the use of a turnover assumption that reflects only nonvested turnover (or the use of no turnover assumption at all) may be reasonable if, for example, either of the following conditions is satisfied:

PENSION COMMITTEE PRACTICE NOTE—2023

- Consistent with ASOP No. 35 section 3.2.1 (last paragraph), the use of a termination of employment assumption for vested employees would not affect the results of the calculation (e.g., in the calculation of the present value of accrued benefits for a vested active employee if the values of the benefits payable for future terminations and other types of decrements are all actuarially equivalent relative to other assumptions used for the measurement, or in the calculation of projected annual benefit payments if the date payments commence is the same for terminations and other types of decrements).
- The small size of the pension plan population does not justify the use of a turnover assumption for longer-service members.

For medium and large plan populations, past plan experience may provide a reasonable starting point for selecting a termination of employment assumption. However, unusual events (e.g., workforce reductions or plant closings) or trends may be factored out of the experience if they are not expected to apply in future years. The actuary could use methods similar to those used in constructing retirement tables when constructing termination tables.

Because termination rates generally vary by an employee's length of service, the format of the assumption is often a table of rates that vary by age and service of the employees. The format may include a select period with higher termination rates for the first few years of service in combination with an ultimate table that varies only by age. The select rates may or may not vary by age depending on what is determined to be reasonable. Alternatively, a table of rates that varies only by age may be used. The use of an age-based, aggregate turnover assumption rather than one that is select and ultimate based on service (or age and service) may be reasonable if, for example, any of the following conditions is satisfied:

- There is insufficient data to justify the select period because the pension plan population is small.
- Credible pension plan experience demonstrates that the use of a select period is not justified or, consistent with ASOP No. 35 section 3.10.2, is immaterial.
- The pension plan has been closed to new entrants for a number of years so that a select period is not necessary.

If short-service employees account for a significant portion of the overall termination experience, but an insignificant portion of the overall obligation, their termination experience might be weighted less in the selection of an appropriate age-based table to avoid understating the overall obligation of the plan.

Various situation-specific factors may be considered in selecting the appropriate assumption from the relevant assumption universe. Some factors may indicate a need to adjust the termination rates or use different rates for different groups of employees (e.g., union versus nonunion, male versus female). Among the employment-related factors that

PENSION COMMITTEE PRACTICE NOTE—2023

may affect termination rates are industry, occupation, unionization, employment policies and practices, work environment and conditions, employer's financial condition, availability of alternative employment, and location. Among the plan-related factors that may affect termination rates are vesting requirements, early retirement benefits and eligibility, disability benefits and eligibility, and availability of a lump sum payment, as well as the availability of other retirement benefits external to the pension plan (such as postretirement medical and Social Security benefits).

If sufficient plan-specific data is not available, the actuary could consider using the termination assumptions developed for a similar employer with a similar workforce. Alternatively, published tables may provide a useful starting point for setting a termination of employment assumption. The 2003 Society of Actuaries Pension Plan Turnover Study¹¹ was developed from pension plan experience data for the period 1995 to 2000. Employment patterns may change over time, so the actuary may consider whether the patterns of termination underlying these older tables may be expected to be reasonable for the current workforce.

Credibility theory and ASOP No. 25 may be useful in combining the actual experience of a plan with an existing table.

Disability Incidence and Recovery

For plans with a significant disability benefit, the actuary may determine that it is appropriate to use a disability incidence assumption. A separate mortality table for disabled employees may also be appropriate; see the practice note [Selecting and Documenting Mortality Assumptions for Pensions](#) for further discussion of disabled employee mortality.¹² If no special benefits are paid on disability or if the disability experience is not readily predictable (e.g., if the plan population is small), the actuary may determine it is appropriate to reflect any expected disabilities in the termination of employment and retirement assumptions, rather than using a separate disability assumption. If plan-specific data is insufficient, the actuary may also consider using disability assumptions developed for larger plans with a similar workforce and disability benefit structures.

Published incidence of disability tables are available, such as the Social Security Administration's *Death and Disability Life Table for Insured Workers* (Actuarial Note No. 2005.6), *Disability Insurance Program Worker Experience* (Actuarial Study No. 114), and *Trends in the Social Security and Supplemental Security Income Disability Programs* (Actuarial Study No. 118). Statistics for the Social Security and Railroad Retirement Systems are also available. The Society of Actuaries and American Academy of Actuaries have also published statistics on disability, such as *1987 Commissioners Group Disability Table (CGDT)*, *2008 Group Long Term Disability (GLTD) Experience*

¹¹ <https://www.soa.org/experience-studies/2000-2004/research-2003-soa-pension-plan-turnover-study/>.

¹² https://www.actuary.org/sites/default/files/files/Mortality_PN_060515_0.pdf.

PENSION COMMITTEE PRACTICE NOTE—2023

*Table Report, Group Long-Term Disability 2012 Valuation Table*¹³ and *Individual Disability Valuation Standard Report of the Joint American Academy of Actuaries/Society of Actuaries Individual Disability Tables Work Group*.¹⁴

Disability benefit eligibility definitions among plans may differ significantly, making it relatively easy for an individual with a given condition to qualify for benefits in one plan while an individual with the same condition may not qualify in another plan. Therefore, actuaries considering using a published table may have to consider the eligibility definition underlying the source of the data in the published table versus the eligibility definition of the particular plan to be valued. When the plan population is sufficiently large, and the employer is able to provide reliable data regarding disabled participants, the disability assumptions may be based on the experience of the employee group. The format of the disability incidence assumption is usually a table of rates by age and possibly gender, and may need to reflect different assumptions if the plan provides different levels of disability benefits.¹⁵ Credibility theory and ASOP No. 25 may be useful in combining the actual experience of a plan with an existing table.

Various factors may be considered in developing a disability assumption for a specific plan. More hazardous occupations and occupations with more intense physical job demands may have higher rates of disability. The plan's definition of disability (e.g., inability to work at one's own occupation versus any occupation; eligibility for Social Security disability) may significantly affect incidence and recovery rates. The level of disability benefits available may also have an impact (e.g., if benefits are small, employees may not file for disability; if benefits are large, employees may be more likely to apply for them and those already disabled may be less inclined to return to work). The amount and availability of benefits outside the pension plan, such as from Social Security, workers' compensation or an employer's long-term disability plan, and the waiting period may affect the expected disability experience of the plan to be valued.

Optional Form of Benefit

In some pension plans, certain payment options are subsidized relative to the other available options. If any of those subsidies are material, it may be appropriate to use an assumption that reflects the percentage of employees that are expected to select each of the various optional forms of payment. When setting the assumption, the actuary may wish to take into account that for employees with benefits that are limited by the IRC Section 415 limit, statutory adjustment factors may apply in lieu of the applicable plan factors (which may be subsidized).

The assumption that every participant will elect retirement under the same form of payment may be reasonable in some cases, for example:

¹³ <https://www.soa.org/resources/experience-studies/2013/group-ltd-2012-table/>.

¹⁴ <https://www.soa.org/experience-studies/2016/hlth-2013-individual-disability-supporting-materials/>.

¹⁵ For example, in public sector plans, disability benefits may be different depending on whether the disability is service-connected (or duty) or non-service-connected (or non-duty).

PENSION COMMITTEE PRACTICE NOTE—2023

- If no optional form of payment is materially subsidized relative to the other available options (see ASOP No. 35 sections 3.2.3(a) and 3.4.6(c)).
- If any subsidized option is available only to a small group of participants such that the impact of ignoring the subsidy is immaterial (see ASOP No. 35 section 3.2.1(e)).

To determine whether an optional form of payment is subsidized, the plan conversion factors are compared to the interest and mortality assumptions used for the valuation. If the plan factors differ significantly from the valuation assumptions, difference in value may be worth capturing with explicit form-of-payment assumptions. This analysis should reflect a reasonable range of future actuarial equivalence bases for both plan factors and valuation assumptions, and the different bases that are used for valuations performed for different purposes (for example, minimum funding calculations versus financial accounting disclosures).

Even if all payment forms are actuarially equivalent under valuation assumptions, using an optional form of benefit assumption may still be more appropriate than assuming all employees elect the same payment form. For instance, valuing optional forms may produce better results for certain types of calculations (e.g., for a projection of plan benefit payments by year to determine future cashflows, or when a yield curve is used to determine the present value of benefits), unless the assumption is not expected to materially affect the results.

The actuarial profession has conducted no large-scale experience studies to develop tables of optional form of benefit election rates. However, actuaries can analyze behavior, such as the percentage of plan participants who elect lump sums, or the election of joint-and-survivor forms to provide spousal protection.¹⁶ The study of postretirement risk and its management is a burgeoning field among both actuaries and other retirement professionals, and relevant studies of benefit election behavior may become available in the future.

The format of the assumption is generally a set of two or more rates for individual payment options totaling 100%. The actuary may consider combining groups of similar options if the difference in liability or incidence of payment is not significant—for example, a plan may have a number of joint-and-survivor options or period-certain options with different guarantee periods, and the actuary may decide it is not necessary to reflect each option individually.

Separate rates may be set for active employees expected to terminate from employment before retirement age, active employees projected to retire directly from active

¹⁶ For example, a 2003 study from the Urban Institute found that “overall, 28 percent of married men and 69 percent of married women opt for single life annuities instead of joint and survivor annuities.” See “Single Life vs. Joint and Survivor Pension Payout Options-How Do Married Retirees Choose?” Urban Institute 2003.

PENSION COMMITTEE PRACTICE NOTE—2023

employment, and previously terminated employees who have not yet elected to commence payments.

When developing a form-of-payment assumption, the actuary will generally consider:

- The benefit forms and commencement dates available under the plan
- The degree to which each payment form is subsidized
- The historical and expected experience of elections under the plan
- Recent changes to the available options under the plan, including changes in the actuarial equivalence basis used to determine the benefits (e.g., changes in the required interest rate and mortality table to value lump sum benefits)
- Changes in other assumptions used for the measurement (e.g., retirement rates)

The actuary may also find it useful to look to the experience of other plans with similarly subsidized payment options. Participant behavior can also be influenced by communications from the plan sponsor regarding different forms of payments, such as relative value disclosures.

Benefit Commencement Date

The benefit commencement age for active employees may be the same as the retirement age or may be later. The actuary should consider relevant plan provisions and applicable experience, if sufficiently credible, to develop a benefit commencement assumption for both active employees and, if appropriate, for terminated participants who are eligible for a deferred benefit.

For participants who do not commence payment immediately upon termination or retirement, the actuary may want to consider whether there are subsidized payments before normal retirement age that may make it more appropriate to assume the benefits commence earlier than normal retirement age. Even if early retirement benefits are actuarially equivalent, the actuary may want to use a table of benefit commencement rates rather than a point estimate for certain types of calculations (e.g., for a projection of plan benefit payments by year, especially when lump sum payments are prevalent), for measurements based on interest rates from a yield curve, or when plan actuarial equivalence factors are significantly different from valuation assumptions.

Administrative Expenses

When administrative expenses (not investment-related expenses) paid from plan assets are material, the actuary may use an administrative expenses assumption. As discussed in ASOP No. 35, the expenses considered may include investment advisory, investment management, or insurance advisory services (to the extent that the costs of these services are not reflected in the investment return assumption); accounting and auditing services;

PENSION COMMITTEE PRACTICE NOTE—2023

actuarial services; plan administration services; legal services; trustee services; and Pension Benefit Guaranty Corporation (PBGC) premiums.

The actuary may choose an assumption based on the experience and expectations of the particular plan and types of expenses. The format of the assumption may be a specified dollar amount, a specified percentage of plan assets, a percentage of benefit obligation or normal cost, or some combination of these. In the case of expenses related to the investment of plan assets, the format may be a specific (and explicitly disclosed) reduction in the investment return assumption.

For many plans, the actuary will want to review the expense assumption every year to reflect changes in the cost of services provided to the plan and PBGC premiums. When setting the administrative expense assumption, the actuary may look to prior years' expense levels and plan sponsor expectations of future expenses, with adjustments to reflect past or future extraordinary expenses and changes in levels of service or in the plan sponsor's policy regarding which expenses are payable from the plan. PBGC variable premiums for underfunded plans may change significantly from year to year based on the plan's funded level and annual premium increases. Investment-related expenses may correlate with asset levels and plan administration expenses may correlate with number of plan participants.

The method for recognizing expenses may vary, depending on the type and purpose of measurement. For example, for accounting under Accounting Standards Codification (ASC) 715 fees might be recognized in the assumed return on assets or using other methods, but IRS minimum funding rules under IRC Section 430 require plan-related expenses to be explicitly added to the plan's normal cost. In addition, when estimating expenses for a partial period (such as for a plan spinoff or termination), the actuary may want to consider the timing of expenses.

Household Composition

Although it is not common, some plans may provide certain benefits that vary with the composition of the employee's family. For example, annuity death benefits may be payable to surviving children under a specified age. If the level of those benefits is material, it may be appropriate to use an assumption regarding the composition of the employee's household.

The actuary may choose an assumption based on the experience and expectations of the particular employee group or, in a small employer plan, of the key employees expected to receive most of the applicable benefit. The format of the assumption may include an expected number of family members of each relevant type and an average age for each type.

Marriage, Divorce, Remarriage, and Age Difference

Many plans offer certain benefits to the spouse after the death of the employee. For these plans it may be appropriate to use assumptions regarding marriage, divorce, and remarriage. Generally, the actuary will set the assumption based on the past and expected future experience of the specific employee group or on the experience of similar groups. The format of the assumption is usually a single amount for the percentage married of the entire employee group or a different percentage by gender and/or age. The assumption will usually reflect a fixed age difference between the employee and spouse or the husband and the wife. In most cases, benefits in pay status are not affected by divorce or remarriage and benefits for divorced spouses may be protected under qualified domestic relations orders (QDROs), so separate assumptions for divorce and remarriage may not be relevant. However, in cases where they are, a separate assumption may be used if the impact would be material. Plan-defined actuarial equivalence should also be considered when determining whether more refined assumptions are needed.

Similarly, if the plan offers benefits to non-spouse contingent annuitants after the death of the employee, the actuary may wish to consider setting an assumption as to the percentage of employees who would have a beneficiary eligible for the benefit under the plan, and the difference in age between the employee and the contingent annuitant.

Open Group

Actuaries providing accounting or funding valuations for private sector plans that are open to new participants generally do not use assumptions to reflect future entrants to the plan. However, where such assumptions are permitted (for projections or modeling, for example), assumptions regarding the number and characteristics of the new entrant population may be appropriate, depending on the purpose of the valuation.

The assumptions may be based on the expectations of the plan sponsor (e.g., maintaining workforce size, expanding it, or contracting it) or, if past hiring practices are expected to continue, on the number and characteristics of recent new hires. The format of the assumptions is generally a number of new entrants per year, or an overall plan population target by year, with new entrants added as needed to reach the target. In addition, the assumption will specify the distribution of new entrants by key characteristics relevant to benefit eligibility and/or benefit amount under the plan, such as age, gender and compensation. It may not be appropriate to assume all new entrants have the same average compensation or enter the plan at a single entry age because this can mask important differences, such as the impact of any minimum benefits under the plan or whether (and at what age) new entrants would qualify for any subsidized early retirement benefits. Such simplified assumptions can also distort long-term results if the projection is carried out far into the future.

In selecting the assumptions, the actuary may consider the expected overall growth of the employee population (i.e., whether the population is expected to increase, decrease, or

PENSION COMMITTEE PRACTICE NOTE—2023

remain stable over time) given the characteristics of the current workforce and the projected employment levels needed by the employer.

Hours of Service

For plans that base benefit accruals or employer contributions on hours of service worked by employees (or other units of production), it may be appropriate to use an hours of service, benefit accrual or contribution income assumption. Such assumptions are usually developed from recent plan or industry experience, plan or industry forecasts and plan sponsor expectations for anticipated industry activity.

When assumptions are applied to partial periods (such as partial plan years resulting from mergers or spinoffs), assumptions may need to be refined if the hours are not consistently earned throughout the year. For example, an employer may have portions of the year during which employees work heavy overtime, or when they routinely shut down plants. In these situations, simply prorating may be inappropriate. Instead, a more appropriate assumption would reflect the hours expected during the actual partial period. This is important, for example, when a full year of service is awarded once a threshold number of hours is reached, such as 1,000 hours, so that service crediting may be frontloaded during the year.

Transfers and Return to Employment

For plans that recognize participant transfers between categories of employment, assumptions as to the timing, frequency, and demographic characteristics of such transfers may sometimes be appropriate, if expected to materially affect the results of the valuation. The actuary may consider both the frequency and direction of the transfer. For example, experience may show that participants often transfer from hourly to salaried status, but rarely transfer the other way.

For plans in which rehires of former employees have been or are expected to be significant, assumptions as to the timing, frequency, and demographic characteristics of such rehires may be appropriate.

Unpredictable Contingent Event Benefits

The actuary may consider whether an assumption should be made to reflect the probability of payment of a benefit that is contingent on an event that is not reasonably and reliably predictable. These situations can be particularly challenging because the event can often cause a significant change in the value of plan benefits, for example, a plan that provides additional benefits in the event of a permanent plant shutdown.

Whether an assumption should be made and how such an assumption would reasonably be determined are generally subject to the judgment of the actuary based on the specific

PENSION COMMITTEE PRACTICE NOTE—2023

provisions of the plan, the condition of the plan sponsor, and the purpose of the measurement. The relevant considerations and implications can be complex and are beyond the scope of this practice note.

While rules governing private sector funding valuations use a single scenario to capture the potential effect of these events, for purposes of measuring and communicating risk, it may be appropriate to provide a range of outcomes reflecting whether or not these benefits are triggered.

IV. Disclosure and Documentation

Required disclosures about the assumptions in pension actuarial communications are described in ASOP Nos. 4, 12, 23, 25, 27, 35, 41, 51 and 56, and generally include the following:

- **Assumptions Used.** Description of each significant assumption used in the measurement and, to the extent known, whether the assumption represents an estimate of future experience, an observation of estimates inherent in market data, or a combination thereof. The information should provide sufficient detail so that another qualified actuary reading the communication can make an assessment about the level and pattern of each assumption. The actuary should also disclose any explicit adjustment made for adverse deviation or for valuing plan provisions that are difficult to measure. In addition, depending on the measurement's circumstances, the actuary may decide to disclose information about interrelationships among the economic assumptions (but this is not required).
- **Rationale for Assumptions.** Information about the rationale for assumptions that have a significant effect on the measurement, including:
 - For each assumption the actuary has selected, information and analysis used to support the actuary's determination that the assumption is reasonable, and
 - For each assumption the actuary has not selected, information and analysis used to support the actuary's determination that the assumption does not significantly conflict with what, in the actuary's professional judgment, is reasonable for the purpose of the measurement.¹⁷

These disclosures may be brief but they need to be pertinent to the plan's circumstances. They should also be based on the assumptions as of the measurement date and should not reflect changes that may be planned for future measurement dates. If there was an explicit analysis of experience that was considered in developing the assumption, the actuary should also disclose the time period analyzed in that study and the date of the study.

- **Changes in Assumptions.** Discussion of any changes in the significant assumptions from the previous measurement, including a description of the changes, their general effects, in words or numerically, as appropriate, and, for assumptions that are not prescribed, a brief explanation of the information and analysis that led to those changes. The general effects of changes of both demographic and economic assumptions made for the same measurement may be disclosed separately or combined, as appropriate. Disclosures may be brief, but they need to be pertinent to the plan's circumstances; also, disclosures may reference any explicit analysis of experience that was considered in developing

¹⁷ This does not apply to prescribed assumptions set by law or an assumption that requires disclosure under "Assumptions not selected by the actuary (other than for prescribed assumptions set by law)" below.

PENSION COMMITTEE PRACTICE NOTE—2023

the assumption, including the date of the study. Note that there may be different required disclosures for changes in assumptions in ASOP Nos. 27 and 35 (summarized here) when compared to the requirements that are currently and may in the future be described in ASOP No. 4 and the actuary should make sure to understand and comply with these provisions.

- **Assumptions Not Selected by the Actuary (general).** Source of any assumption that the actuary has not selected. If the communication is silent about responsibility for the selection of an assumption, the actuary(ies) who signed the communication will be assumed to have taken responsibility for that assumption.
- **Assumptions Not Selected by the Actuary (other than for prescribed assumptions set by law).** Identification of the following, if applicable:
 - Any assumption that significantly conflicts with what the actuary judges to be reasonable for the purpose of the measurement (note that for this purpose, a reasonable assumption is not limited to what the actuary would have selected), and
 - Any assumption set by another party that the actuary is unable to evaluate for reasonableness for the purpose of the measurement.

If the assumption does not conflict significantly with what the actuary judges to be reasonable for the purpose of the measurement, there is no required disclosure.

- **Assumptions Not Selected by the Actuary (reliance on other sources).** Statement when the actuary relied on other sources (other than prescribed by law) and thereby disclaims responsibility for a material assumption, including
 - That the assumption that was set by another party
 - The party who set the assumption
 - The reason the party rather than the actuary set the assumption, and
 - That either (i) the assumption significantly conflicts with what, in the actuary's professional judgment, would be reasonable for the purpose of the measurement, or (ii) the actuary was unable to judge the reasonableness of the assumption without performing a substantial amount of additional work beyond the scope of the assignment and did not do so, or the actuary was not qualified to judge the reasonableness of the assumption (note that there may be a conflict between this section 4.3(d)(2) of ASOP No. 41 and the new requirements of ASOP Nos. 27 and 35).
- **Assumptions Prescribed by Law.** Summary of the applicable law (statutes, regulations, and other legally binding authority) under which the report was prepared, the assumptions that are prescribed by that law and disclosure that the report was prepared in accordance with that law. This disclosure is required regardless of whether the actuary believes the assumption is appropriate for the purpose of the communication.

PENSION COMMITTEE PRACTICE NOTE—2023

- **Subsequent Events.** Discussion of any relevant event that meets the following conditions:
 - It becomes known to the actuary after the date through which data or other information has been considered in developing the findings included in the report;
 - It becomes known to the actuary before the actuary’s report is issued
 - It may have a material effect on the actuarial findings if it were reflected in the actuarial findings; and
 - It is impractical to revise the report before it is issued.

Also, if the actuary learns of changes to data or other information (on or before the information date) after some findings have been communicated but before the report is completed, the actuary should communicate those changes and their implications to any intended user to whom the actuary has communicated findings.

- **Deviation From ASOP Guidance.** Discussion of any material deviation from the guidance in an applicable ASOP (other than as described above under “Assumptions Not Selected by the actuary (reliance on other sources)” or “Assumptions Prescribed by Law”), including the nature, rationale, and effect of the deviation.
- **Material Inconsistencies.** Disclosure of any material inconsistencies among assumptions, and known reasons for such inconsistencies.

Although this is a summary of disclosures related to assumptions, ASOP Nos. 4 and 41 include other items required to be disclosed in an actuarial communication. The actuary should refer to those ASOPs to ensure inclusion of all required disclosures.

Nothing in ASOP Nos. 4, 27, or 35 is intended to require the actuary to disclose confidential information.

If the form and content of an actuarial communication is in a prescribed form that does not accommodate these disclosures (such as for a required government form), sections 4.2 and 4.3 of ASOP No. 41 state that the “actuary should make these disclosures in a separate communication (such as a cover letter to the principal), requesting that both communications be disseminated together where practicable.”

The actuary may also want to document the assumption selection in internal workpapers to support compliance with the requirements of section 3.16 of ASOP No. 27 and section 3.11 of ASOP No. 35. The actuary may use professional judgment to determine the degree of the documentation and may want to consider the complexity and purpose of the actuarial services. This documentation may describe the assumptions selected for the analysis and the rationale for the assumption selection, including the basis for selecting these assumptions, the process used to review them, and the results of any experience or

PENSION COMMITTEE PRACTICE NOTE—2023

gain/loss analysis; the effect of any special events; and the effect of any assumption changes.